

NATIONAL RECORDER.

"Nec aranearum sane textus ideo melior, quia ex se fila gignunt, nec noster vilior quia ex alienis libamus ut apes."

VOL. II. Philadelphia, December 25, 1819. No. 26.

Communications.

For the National Recorder.

APPRENTICES.

It ought to be the great object of every community, to spread among all the members of it, as much knowledge as possible. In pursuance of this principle we establish public schools for teaching the first elements of learning to all children whose parents are unable or unwilling to pay the expense themselves. In our republican government it is peculiarly necessary to cultivate the understandings of the great mass of the people, and a policy that would promote this end, is much more likely to be adopted than in any other nation.

It has appeared to the writer to be a practicable improvement to establish public institutions for the *instruction of apprentices in the scientific parts of their trades*. The carpenter, the cabinet-maker, the turner, the dyer and very many others, would derive great advantages from such a scheme. They would not only be better qualified to attain excellence in the present state of their business, but would be better able to make improvements. A great deal of talent has been shown in the United States, in the invention of useful and labour saving machines, but it seems likely that more success might be expected, were our young men better taught.

How far such instruction could be extended, the writer has not formed an opinion; but he wishes to excite attention to the subject, in the hope that *something* may be done. How would it do to commence in this city, by giving instruction in the evenings, to apprentices to some specified trades? The expense of suitable *professors* would be in-

VOL. II.

considerable, as only that part of their time would be occupied, which is not usually engaged in business. Suppose, at first, six teachers engaged at \$250 per annum each, and suppose other expenses \$1000: this would make \$2500, or about *two cents* for each person in Philadelphia. The plan might be afterwards amended, as it should be found convenient. It would perhaps be proper to erect a building, and to incur other expenses, to place the institution on a permanent establishment. Would not public lectures be useful?

Seeing a French work, called the *Turner's Manual*, filled with plates containing drawings of tools, patterns, &c. first caused the writer to think of such a scheme, and he prays the attention of the people of Philadelphia, to a suggestion that would, he thinks, have met the approbation of the venerable patriot whose name he ventures to assume.

FRANKLIN.

FOR THE NATIONAL RECORDER.

GRAPE VINE.

On the Cultivation of the Vine, the Fabrication of Wines, Brandies, Rectified Spirits of Wine, Cremor Tartar, and Dried Fruits, and Fresh Grapes, for Food and Diet—A RECAPITULATION.

No. VIII.

The importance of this culture is proved by the facts, that the celebrated statesman, minister, and philosopher, Mr. *Chaptal*, declares it to be the *second* object in the agriculture of France, though it occupies but 2,000,000 of arpents of land, which are less than 2,000,000 of our acres. The whole amount of the productions and fabrications of the vine in France, is estimated at 100,000,000 of dollars. The soil which is generally used, and which produces the finest wine, is of inferior character and quality, often unfit for grain and cattle farms. The vine country of the United States, as held, in *extenso*, under the Louisiana treaty of A. D. 1803, or as proposed by our government to be modi-

C c

fied and reduced to narrower limitations by the Florida treaty of 1819, is much larger than that of France, the most extensive and valuable vine country owned and cultivated by any one people of the world. The experiments made in Indiana, Kentucky, North Carolina, South Carolina, and Cohauila, from 26° north latitude to $38^{\circ} 40'$, in *North America*, prove the natural and present capacity of all that region, of nearly nine hundred common miles from south to north, for the production of the grape, as a crop; and as our country shall be cleared of its woods and forests, and drained in its great and small swamps, marshes, and alluvial grounds, the sphere of the vine will be improved and extended to one thousand miles. The region of the cotton, in its utmost northern extension, seems fairly to promise encouragement to the cultivator of the vine. Hence St. Mary's and Talbot, in Maryland, Sussex, in Delaware, Cape May, in New Jersey, and the banks of the Rappahannock, in Virginia, which, in the wars of 1775 and 1812, used their own cotton, are likely to gain by the application of their refuse lands, hills, ridges, sands and gravels, to the formation of *vineyards*, which do not, like rice, indigo and sugar, require men of colour. The success of the vine in Judea, (five to ten degrees south of the Orange Groves of Macedonia, Nice, Portugal, Spain, and Provence and of their vineyards; with our North American *Cohauila*,) proves irrefragably, that no part of the United States is too hot for the vine. Many errors occur in new cultivations. The papers of "The Friend to National Industry," No. 1 to 8, in November and December of this year, are intended to prevent some of these. The employment of rich, bottom, and flat lands, and of stable manure, are shown to be against all the advices of the experienced vine cultivators of Europe. The republication of those papers from the National Intelligencer, the Philadelphia National Recorder, and the Baltimore Farmer's Gazette, in some of the newspapers of all the states from 39° north to the Gulf of Mexico, would be an useful incitement and opening of the subject. It is respectfully suggested, that "a joint committee of agriculture," if appointed by the senate and house of representatives of the United States, could not take up a more important subject, as far as memory at present serves. One hundred millions of dollars from our two millions of worst lands, in the extensive country south of Pennsylvania, is a most important object, at this time, when our other crops are falling. If that vast southern district and population employ themselves on this new branch of culture, the states north of Maryland, Delaware and Virginia, will have to themselves so much more of the grain, grass, and cattle farming. Those, who raise vines, canes, cotton, rice, indigo, tobacco, figs, prunes, dates and olives, cannot raise bread and meat, but must want to buy them of those, who cultivate grain and cattle farms. The interest of New York and the north, though

indirect in the proposed southern vineyards, is as plain as the *direct* interests of the Carolinas, Georgia, the states formed out of Louisiana, Virginia, Kentucky, and Tennessee, in those vineyards; or of Indiana and Illinois.

This cultivation, by collecting white families on very cheap and healthy lands, in a wholesome culture, chiefly with the plough and harrow, will multiply white population in the south, and render the gradual abolition of slavery more early, safe, and practicable.

It is certain, that the culture of the vine and the fabrication of wines is compatible with a very industrious and successful prosecution of agriculture for general purposes. It has been considered in Europe, that no country more abounded in the necessaries for human comfort and subsistence, than the dominions of the emperor of Germany in 1794, or Austria, Hungary, Bohemia, and Lombardy. Yet these were all profitable wine countries. So of Switzerland, where grass lands, irrigated, have been sold at one thousand dollars per acre. So of Piedmont. So of France, in which wine and brandy are made, in all its old provinces, except Artois, Picardy, Normandy, and the middle and northern parts of the two provinces of Bretagne and Maine. In those north-western provinces, the grape, unfit for wines, is elegant and fine for sustenance and for diet. In the other twenty-five of the ancient provinces, the vine and the fabrication of wines generally prevail, occupying grounds of the extent of less than half of New Jersey, yielding a gross yearly income of one hundred millions of dollars. Yet wool, iron, silk and flax, bread and meat, builders and improvers and manufacturers' wages are lower in France than in the United States. The vine cultivation is then perfectly compatible with a good general system of national industry. The north of Germany, Silesia, Sweden, Denmark, England, and the Netherlands, only refrain from the vine, because they are too far north. So the northern British provinces of America will never cope with us in our vineyards, more than in our sugar, cotton, rice, tobacco, and indigo plantations. Since all vines were once wild, like all men and other animals, it must be presumed, that it is our interest to cultivate all our wild grape vines. The wood, or natural meadow strawberry, *cultivated*, in bunches, so as to hoe between the rows, is improved strikingly in a year or two. So of the red currant. Rich, full coloured green, or black grapes, of the largest and ripest, picked from the bunch, must afford the best means of propagating *by seed*. In Scotland, the red and the white currant, thus propagated, has been trebled in goodness, beauty, and size, for currant wine.

The grape has been manifestly intended by Divine Providence, as a food and a diet for the inhabitants of warm climates, and for more northern people, in the hot season. So of its excellent vinegar, salt or tartar, and dried fruit. The French and Spaniards keep their fresh grapes as we keep apples; and

we constantly import fresh or undried European grapes into all our seaports, where they are sold for 40, 50, and 60 cents per lb. They might be sent from the southern states to those north of the Chesapeake, like their sweet and sour oranges.

The methods of procuring seeds, cuttings, vines, books of instruction, vine-dressers, information as to tools, implements, utensils, presses and buildings, can be collected from many French, Spanish, Portuguese, German, Italian and English books, which should be sought in our stores and libraries, and imported by booksellers, individuals, travellers and library companies.

A FRIEND TO NATIONAL INDUSTRY.

Philadelphia, Dec. 10, 1819.

FOR THE NATIONAL RECORDER.

SATURDAY SERMON.

No. 6.

"We spend our years as a tale that is told."

Psalm xc. 9.

Carried along by the stream of time, our attention is absorbed by business or pleasure, and though we are constantly reminded of the unpausing strength of the current, by discovering how rapidly we glide past all fixed objects, the motion is so gentle, that we are seldom roused to a serious consideration of the manner in which we have been engaged, or of the great ocean of eternity that lies before us. The lapse of a *day* is unregarded; a *week* frequently appears short; we sometimes think a *month* ought to have produced more profit to us: but we do not consider our time as irrevocably gone, till we are startled by the thought that a new year has begun. A year is so considerable a part of the longest life, that few who think at all, can notice its departure without some serious reflection and sad regret. The opportunities of improvement that have been carelessly or viciously lost, recur to our remembrance, and we mourn that so little has been done to make ourselves better, or to promote the happiness of others.

When year after year has thus passed away, and been regretted in vain; when we have often felt that our strongest resolutions fade before the slightest opposition; when we find the silvery hue of age covering our heads without bringing with it the wisdom which our youth anticipated—we are too apt to feel so strongly

the weakness of which we have been guilty, as to lose the hope of any change in our future life, and endeavour to banish the thoughts that give pain without producing amendment. But this is as unwise as it is criminal: he who feels the approach of age and infirmity, has passed by many of the temptations to idleness and folly; and though he have lost that portion of his being in which his bodily powers were best calculated to support his mental labours, he has had so much experience of his own weakness, that he can better fortify himself against indulgence in the pleasures which have enervated his powers, or the indolence that has wasted his life.

But it is to those who are just entering into the busy scenes of life, that the voice of the monitor should speak most loudly. They may have yet a long life before them, the usefulness and happiness of which depends upon the manner in which their years shall be employed: they may devote their hours to industrious exertion with a certainty of reaping the reward of their labours: their habits are not yet so strongly rooted as to stand before a short exertion of strength: their future destiny is in their own hands, and they may, by a few years of persevering labour, make labour itself pleasant.—Then, unimbittered by the remorse that must attend those who late in life attempt to change the strong bias of indulged habit, they will find themselves constantly growing in favour with man, and while they are gradually acquiring all that is worthy of a wise man's desire, they will be made happy by the approbation of the "still small voice" that blesses those who fulfil the end of their creation.

While expatiating upon the reward of industry, I would not willingly be silent upon the best means of becoming diligent; but the advice of those who are better qualified to give instruction, has been so often heard, that there will not perhaps be one of the youngest of those who may read this call to them, who will not have seen the same counsel before. But we do not so much need a monitor to teach us what is right, as to remind us of what we know; and I therefore request a few moments attention from those who desire to improve their mental and moral powers, and to qualify them-

selves for an honourable performance of the duties of life.

If you have resolved to begin a new course of life, and to employ your time to better advantage, *do not delay for an hour your proposed reformation*. Be diligent in the employment in which you are now engaged. If it be not that in which you take most pleasure, do not wait till you change it, for in the mean time your old habits will fasten themselves more strongly upon you and your present intentions will fade away. Carry with you to the business or study from which you hope the greatest advantage, all the *momentum* (if I may so call it) that your mind will derive from active exertion in your *present* pursuit. If you have formed any regular plan of employment it will be an advantage; but if you have not, do not delay your industry till you have determined in what manner it may be best applied. *Do something* at once, and arrange a *general plan* at those times when you are necessarily unemployed. There is sufficient time for meditation without encroaching on the dominion of activity.

Do not neglect short periods of time. Any man who is engaged in an employment from which he derives the means to live, will find so much of his time necessarily occupied in this first care, that there will be few large portions at his command for other purposes. But there is no one who could not gain much by making the best use of the intervals that take place in the busiest life. In addition to the immediate advantages that you will thus derive, you will keep alive the active spirit of industry and be prepared for great occasions, if such should await you.

In order to persevere for a long time in any laborious occupation of the mind, *you must constantly fix your attention upon objects worthy your ambition*. Without great watchfulness, not only over your *external* actions, but over your thoughts, you will be in danger of substituting some present gratification, for the future good at which you should always aim. If you are not already fully convinced by your own experience, you will scarcely listen to the voice which warns you to *flee from temptation*. In youth it is difficult to believe that we are so weak as the old tell us we are; the

young enthusiast thinks it inglorious to seek safety in flight, but boldly faces the danger, and before he feels the necessity of guarding against them, Pleasure has charmed away all resistance, and the soft fetters of Habit have bound him. And here let me most earnestly entreat you, as you value your future advancement and happiness, not to indulge in *reveries*, which are so pleasant at all times, and so delightful in youth. You will perhaps seek to excuse yourselves for dwelling upon ideal scenes of successful virtue, by considering the contemplation of the reward that awaits the proper employment of the intellectual powers as an incentive to exertion. But if you often pause in your labours, to feast upon these fancied enjoyments, you will soon dislike all other than *imaginary labour*, and will lose the objects of your hope, by ceasing to deserve them. From a conviction that this pernicious habit of the mind, arrests the course of many a young man towards usefulness and honour, I am desirous of impressing its danger fully on your minds. If it have already become habitual, you must strongly determine to employ yourselves upon nothing but real objects, till you have recovered a healthful imagination, and must always guard against a relapse.

Finally, let me recommend to you a *frequent examination of the manner in which your time has been spent*. At the close of every day, recal to mind the occupations in which you have been engaged, and you will see what has been done, and what it was that hindered your doing more. Some part of every Sunday would be well taken up by a review of the past week. A month is a considerable part of life, and you should never be satisfied unless you have made in that time some acquisition of importance; advanced in some science, and conquered or weakened some fault. — At the end of every year, recollect the resolutions with which it was commenced, and examine how far you have fulfilled them. It would be well that these examinations were made in writing, as it would conduce to fixing your attention, and by enabling you to trace your progress more accurately, would promote your industry and virtue.

While thus examining the use that has been made of the capacity and opportu-

nity with which God has favoured you, your attention will be almost necessarily directed to the end for which your life was given. You will in some degree throw off the habits and prejudices which cling to you in your passage through the world, and will compare your conduct, not with the artificial and vicious standards that are around you, but with the pure virtue taught by the precepts and example of the DIVINE AUTHOR of our holy religion. While you are thus elevated above the sordid part of your nature, your years will not be 'spent as a tale that is told,' but will gain for you great happiness, both in this life and in that state of being which follows it. YORICK.

To the Editors of the National Recorder.

My object, gentlemen, in addressing you at this moment, is to call your attention to the article upon "beggars," in the twenty-first number of your highly useful and interesting publication. The sentiments of the writer, upon the subject of pauperism, are very judicious, and the information which appeared to elicit the expression of those sentiments is perfectly correct: provided there be no misapprehension respecting the description of labourers whom it is contemplated, to send into the interior of this or any other state, under the expectation of procuring constant employment. If, by "beggars," those miserable objects of wretchedness and disease be alluded to, who infest our streets, begging from door to door, and importunately soliciting from all whom they meet, a scanty pittance to rescue them from starvation; who would rather eat the bread of disgraceful idleness, than earn it by the commendable exercise of that muscular strength with which the God of nature had invested them; or such as have fallen victims to *intemperance*, and have thus become incapacitated for the performance of the manual labour which would inevitably be required of them;—if such objects of penury and want be alluded to, I must frankly acknowledge, that the *interior of Pennsylvania* holds out no inducement to the philanthropist, thus to endeavour to exonerate his fellow citizens from the burden of their support. If, however, it was intended to apply those

remarks to the immense number of honest, sober, industrious mechanics or labourers, who, in consequence of the stagnation of commercial enterprise and the unprecedented distresses of the times, are unfortunately deprived of their accustomed employments, and thus of their honest livelihood, to such persons the recommendation of the writer of the article in question, to direct their course towards Philipsburgh, in Centre county, would be peculiarly applicable; for, in consequence of the numerous farms, the progressive improvements, and the iron works in the immediate vicinity of that town, together with the rapidly increasing settlement of the whole of that section of our state, persons who are able and willing to work, could unquestionably procure constant employment, and a comfortable subsistence—and by the exercise of industry, perseverance and frugality could, in a comparatively short period, become proprietors of fertile land—the happy cultivators of their own soil: thus securing for themselves and their families, that degree of comfortable independence and exemption from want, to which they could never have attained, while remaining within the crowded precincts of one of our Atlantic towns.

Those foreigners also who have been induced to emigrate to the United States, in consequence of the destructive wars or civil commotions of the old world, or the oppressive and intolerable load of taxation imposed upon them by their respective governments, or who have been allured by the enchanting, but highly exaggerated picture which has been drawn of the advantages and fertility of the *unhealthy regions* of the south-western section of our country, ought certainly to establish themselves in the *interior of some of the Atlantic states*. Those able-bodied, industrious mechanics or labourers, who have crossed the Atlantic, with the confident hope of procuring immediate employment, or under the delusive expectation of finding money profusely scattered in our streets and highways, and who have consequently been woefully disappointed, ought not to be disheartened; for I can strongly recommend to persons of this description, who may be destitute of capital, as well as to those industrious and substantial farmers, whose finances may be in a more

flourishing condition, to repair immediately on their arrival, to Huntingdon, Centre or Clearfield counties, where, in consequence of the numerous manufacturing establishments, the *former* could procure constant employment, whilst the *latter* would be furnished with a market, *at his very door*, for the surplus produce of his farm; and all these advantages may be enjoyed in a section of the country *proverbially healthy*, where the land is fertile and productive, and where it can be procured upon the most reasonable terms; where there is an *abundant and never-failing supply of remarkably fine water*, and where the climate is pure and delightful.

As this communication is intended to convey to you additional information, for the purpose of carrying into more successful operation your humane views, it may not be irrelevant further to remark, that a *turnpike road* is already laid out from Bellefonte to Philipsburgh, and thence to the river Susquehanna, at the mouth of Anderson's creek, where it becomes incorporated with the *turnpike road* to Lake Erie, a portion of which is already completed, thus forming a highly important chain of communication from the Atlantic ocean to our great inland seas. It is the determination of the managers of the *turnpike roads* from Bellefonte and Philipsburgh to the Susquehanna, to avail themselves of the earliest opening of the spring to commence their operations: a great number of working hands will consequently be required.—Those honest and able-bodied men therefore, who are determined to support themselves and their families by their own industry, are now presented with an opportunity of procuring that *regular and profitable* employment which they cannot reasonably expect to obtain from the crowded and overgrown population of our seaport towns.

AMICUS.

Dec. 22d, 1819.

Improvements.

Imprisonment for Debt.—The governor of North Carolina, in his late message to the legislature of that state, says, "Imprisonment for debt must be considered as a kind of punishment which is inflicted at the mercy of the creditor, and must often be exercised upon objects where pity and not punishment is due.

In truth, it seems to be a remnant of that Gothic policy which prevailed during the ruder ages of society; a policy as barbarous as it is useless, and it is to me strange that it should so long have been suffered to disgrace the code of laws of a state, which might otherwise boast of its freedom and humanity. An amelioration in this respect may have the effect of curtailing the extended system of credit that exists at present, as it will take from the creditor one of his most potent engines for the coercion of a speedy payment; but this I have no hesitation in believing, will be ultimately of real benefit to the community, and as an evidence, advert to the embarrassments above alluded to, owing in part, unquestionably, to causes intimately connected with the facilities of obtaining the means of engaging in speculative enterprises, the advantages anticipated from which, if realized, would only have a tendency to enervate and palsy the virtue and patriotism of our citizens."

[*Morn. Chron.*]

Plan for abolishing Slavery.

The discussion of the Missouri slave question has caused much conversation in the United States upon the subject of slavery itself. In general it is admitted to be a thing wrong in its own nature, and pregnant with disastrous consequences to the future quiet and prosperity of the republic. It is also generally admitted that the contemplated exclusion of slaves from the state of Missouri, would operate nothing in their favour; on the contrary would aggravate their miseries by increasing their numbers in those states where their labours would be greater and their comforts less.

As a friend to the human race, be its colour what it may, I wish to see the black population of America relieved from their bondage; as a citizen of the republic, I wish to see its bosom purified from a race which may jeopardize its happiness; as an owner of slaves I am willing to surrender my claims on just and equitable principles; as an inhabitant of Missouri I am ready to resist to the last extremity the exercise of a pretension on the part of Congress which would aggravate the miseries of the slaves, deprive their masters of their property, promote the success of a political intrigue, and violate the sovereignty of the state in which I live.

The republic is full of abstract declaimers upon the evils of slavery: men who enforce everlastingly what nobody disputes. At the same time they propose no plan of practical emancipation, and the acquisition of an ephemeral personal popularity seems to be at once the object of their ambition and the reward of their labour.

In the meanwhile it is certain that the republic may extinguish slavery, in all her dominions, on just and equitable terms, if she is disposed to do so.

The number of slaves within her limits does

not exceed 1,200,000. The females but half that number; their average value not more than \$200; their total value but 120 millions.

The republic owns east of the Mississippi 150 millions of acres of public land; west of it 1100 millions; total 1250 millions.

At two dollars an acre it would require but 60 millions of these acres to purchase all the female slaves in the United States, and the purchase and liberation of the females would accomplish the object: the children following the condition of the mother would be free by birth; the existing race of males would be free by death; and slavery itself would be extinguished with the extinction of the present generation.

To give effect to a plan of emancipation on these principles, a law of Congress should be passed to assess the value of the female slaves; to fix the age at which they should become free; and to give a certificate of the assessed value to the different owners. The certificate should be receivable in payment of all public lands. Before going into operation, the law should be submitted to a convention of those interested in each of the slave holding states. If adopted by the majority of the convention in any state, the law should go into operation throughout that state.

The practicability of this plan admits of easy demonstration.

If proposed by Congress, it would hardly be rejected by the slave holding states. *Justice, safety, interest*, would combine to make them adopt it. Some would vote for it because they would feel the injustice of denying liberty to a human being when it could be granted without injury to themselves; others because they would be willing to avert from their posterity the desolating horrors of a servile war; others because they would see, in the bargain proposed, the exchange of a perishable property, of uncertain increase, for an imperishable estate, which would continue to rise in value as long as liberty and property should continue to be protected in this free and happy land. Nor would the republic find its wealth diminished. The land bestowed would be covered by free men, and cultivated by patriot hands. It would become the means of augmenting the true wealth and power of the republic, by increasing the number of those who would be able to pay taxes and bear arms for its support, and ready to lay down their lives when the service of their country should demand it. HOWARD. *St. Louis Enquirer.*

M. Dumont has announced a useful discovery, that fruits may be preserved by means of carbonic acid gas. They were placed in glass vessels, filled with carbonic acid gas, obtained from carbonate of lime by sulphuric acid, and neither the colour nor taste of cherries was altered at the end of fifteen days; and, at the end of six weeks, they were in the same state as if they had been preserved in brandy. [Christ. Obs.]

Literature and Science.

Institute of France.—M. La Place has given the following results, as deduced both from analysis, and from the experiments made with the pendulum in both hemispheres.

1. That the density of the strata of the terrestrial spheroid increases from the surface to the centre.

2. That the strata are very nearly regularly disposed around the centre of gravity of the earth.

3. That the surface of this spheroid, of which the sea covers a part, has a figure a little different from what it would assume in virtue of the laws of equilibrium, if it became fluid.

4. That the depth of the sea is a small fraction of the difference of the two axes of the earth.

5. That the irregularities of the earth, and the causes which disturb its surface, have very little depth.

6. That the whole earth has been originally fluid.

These results (he says) ought to be placed among the smaller number of ascertained truths which geology at present furnishes.

M. Thenard announces that he has obtained water which contains in weight double the usual quantity of oxygen; that is, 100 parts of water absorb 88.29 of oxygen. This oxygenated water is colourless, and has no smell in ordinary circumstances, but a particular odour in a vacuum. Its taste is astringent. It acts upon the skin like a sinapism. Its specific gravity is 1.45. When a drop of it is let fall upon a stratum of oxide of silver, a detonation takes place; the oxygen of the water, and that of the oxide, are disengaged; a great quantity of heat is developed; and light is produced so sensibly, as to be perceived where the darkness is not very intense. The same phenomena take place with platinum, gold, &c. [Christ. Obs.]

Artificial Cold.—The various methods adopted for the production of low temperatures, by artificial means, have been founded principally on the change of a body from the solid to the fluid state; though, in the refined processes of Mr. Leslie (see Christ. Observ. for 1812, p. 387, also for 1817, p. 610,) it is from the fluid to the gaseous state. M. Gay Lussac has proposed another method of producing cold, which may be extended much farther. It is founded on the principle that bodies change their temperature with their bulk; the former increasing if the latter is diminished, but diminishing if it is increased. If air be suddenly compressed to one-fifth of its former volume, it will inflame tinder; and to do this requires a heat of about 572 degrees Fahrenheit. The air, therefore, has been thus heated by compression into one-fifth of its former bulk, and we can easily suppose the capability of raising it much higher by more strong and rapid compression. If,

therefore, a portion of air, compressed by five atmospheres, and reduced to the common temperature, be suffered to dilate instantaneously, it will by this theory absorb as much heat as it gave out on compression; and, supposing the capacity of the air for heat to remain constant, will be correspondingly reduced in temperature. Therefore, taking air compressed by a force equal to fifty, one hundred or more atmospheres, the cold produced by instantaneous dilation will have no limit.

[*Christ. Obs.*

Yesterday about two o'clock, P. M. an India wash-basin, (wooden) was fired by the rays of the sun passing through a fish-globe, nearly filled with water. The basin was accidentally placed at the distance of about four inches from the globe standing on a side-board in the parlour. Soon after the sun had entered the direct line passing through the globe and basin, the latter was found to be on fire. If the fire had not been seasonably discovered, it is probable the house would have been much injured, or wholly consumed. Pieces of paper were repeatedly fired, when placed in the focus of refracted rays.

[*Boston D. Adv. Dec. 14.*

Literary.—A Prospectus has just been issued for publishing by subscription the Poetical Works of John Trumbull, L. L. D. in two volumes, price five dollars.

Hints to Emigrants, or a Comparative Estimate of the Advantages of Pennsylvania, and of the Western Territory, &c. by John Lorain, of Philipsburgh, Centre county, Pennsylvania, is just published, by Littell and Henry.

Lieut. Hall, of Great Britain, is preparing for the press Travels in France.

The Academy of Dijon has offered a prize of 300 francs, for the best essay on the means of putting an end to the system of duelling.

[*Christ. Obs.*

Egypt.—It is said that the Pacha of Egypt has procured from 5000 to 6000 volumes, to be sent to him from Paris, chiefly on politics, on ancient commonwealths, on the history of Egypt, on Bonaparte's campaigns, and on the new system of education, which he hopes to adapt to Arabic literature.

[*Id.*

FINANCIAL.

There were several statements accompanying the annual report of the secretary of the treasury; from which the following facts are condensed:

The amount of gross revenue, from duties on imports, tonnage, passports, and clearances, &c. and of the expenses of collection for the four last successive years, for which returns are fully made up, were as follow:

	GROSS.	EXPENSES.
In the year 1815,	36,771,038 09	465,015 53
1816,	28,300,473 06	816,373 50
1817,	18,269,585 81	744,810 66
1818,	22,574,873 63	746,422 15

Subtracting the last column from the first, will show the nett amount of the revenue for the same years respectively.

The tonnage employed in foreign trade, appears, from the records of the treasury, to have been, in successive years as stated to the first column below, and the proportion of foreign tonnage to the whole amount of tonnage employed in the foreign trade was as stated in the second column:

	Tonnage.	Proportion of foreign.
In the year 1815,	917,22	23,6 to 100
1816,	1,136,604	22,8 to 100
1817,	992,556	24,4 to 100
1818,	916,514	17,6 to 100

The total amount of sales of public land northwest of the Ohio, from the opening of the offices to the 30th of September, 1818, was \$21,545,797 45. The amount of such sales from 1st October, 1818, to the 30th September, 1819, was \$4,939,658 84.

The total amount of sales of public lands at the offices in Mississippi and Alabama, from the opening of the offices to the 1st of October, 1818, was \$7,950,661, and the amount of sales from that date to the 30th September, 1819, was \$9,705,889.

The balance outstanding of the treasury notes (issued during and just after the war) is only \$181,821.

We do not before recollect to have seen a statement of the amount of claims awarded by the commissioners appointed under the act for a compromise and settlement of Yazoo claims; for which amount stock was issued, receivable in payment for public lands in the then Mississippi territory. The awards were as follow:

To individuals claiming under the Upper Mississippi Company,	\$350,000 00
Tennessee Company,	531,428 5
Georgia Mississippi Company,	1,412,134 96
Georgia Company,	1,887,040 95
Citizens' rights,	101,541 16

Nat. Intel.] 4,282,158 12

Record.

Sixteenth Congress.

FIRST SESSION.

SENATE.

Dec. 14.—A message was received from the President, stating he had signed the resolution for the admission of Alabama into the union.

John W. Walker, a senator from said state, appeared and took his seat.

Mr. Dickerson of N. J. introduced his resolution for changing the constitution as it respects the election of electors and representatives—which was read and passed to a second reading.

A message was received from the President, transmitting copies of a digest of the commer-

cial regulations of those nations which have commercial intercourse with the United States, printed under the direction of the executive, in pursuance of a resolution of the Senate, 3d March, 1817.

Dec. 15.—Mr. Dickerson's resolution was read a second time and committed.

Dec. 16.—The several standing committees of the Senate were appointed, viz. foreign relations, finance, commerce and manufactures, military affairs, naval affairs, the militia, the judiciary, public lands, claims, pensions, post office and post roads, District of Columbia.

Dec. 20.—A motion was laid on the table for inquiring into the expediency of selling less than a quarter section of land.

HOUSE OF REPRESENTATIVES.

Dec. 14.—On motion of Mr. Lowndes of S. C., it was resolved that the secretary of state be directed to report to this House what information he may be able to obtain, as to the regulations and standards of weights and measures in the several states, and as to the proceedings in foreign countries for establishing uniformity in the weights and measures; together with a plan for fixing a standard for weights and measures in the United States.

Mr. Williams of N. C. offered for consideration a resolution to request information of the President, on the subject of illegal punishments in the army. This resolution was founded on the reports which had been current, of colonel King having a deserter shot at Pensacola without trial. Much debate ensued, and the resolution was finally adopted.

On motion of Mr. Taylor of N. Y. that a committee be appointed to inquire into the expediency of prohibiting the introduction of slavery in the territories beyond the Mississippi, the motion was laid on the table.

Dec. 15.—After some private reports were read, a message was received from the President, transmitting sundry documents in relation to Wm. White, a citizen of the United States, imprisoned by the government of Buenos Ayres. A letter was read from the secretary of the navy, stating that the appropriations made for the support of the navy by the act of February last, are exhausted, and that a partial appropriation has become necessary, in addition to that already made, for the service of the present year. It was referred to the committee on naval affairs. The committee on military affairs were instructed to inquire into the expediency of establishing an additional national armoury.

A resolution was passed that the secretary at war should lay before the House of Representatives, the several topographical reports that have been made to the department respecting the practicability of a canal between the Illinois river and lake Michigan.

The committee on revolutionary pensions was instructed to inquire into the manner in which the pension law of 18th March, 1818,

was executed, and whether it be expedient to amend or repeal it.

Mr. Taylor's resolution of yesterday was taken up and agreed to, and a committee of seven members appointed. Mr. Taylor then moved to postpone, till the first Monday in February next, the order of the day on the bill authorizing the people of Missouri to form a constitution. After some debate, in the course of which Mr. Scott, delegate from Missouri, urged the necessity of a speedy decision, that, if determined in the negative, the people might have time to form a constitution without the authority of Congress. The second Monday in January was adopted.

Dec. 16.—Some bills of a private nature were reported. Mr. Sergeant, from the committee on the judiciary, reported a bill to establish an uniform system of bankruptcy throughout the United States, which was twice read and committed.

Dec. 17.—The Speaker laid before the House a letter from the secretary of the treasury, transmitting a statement of the exports from the United States during one year, ending 30th Sept. 1819; and also a letter from the commissioners of the revenue, transmitting an annual statement of the proceeds of the direct tax and internal duties, &c. A resolution was passed, directing the secretary at war to report a statement of the expense of feeding the army for the term of one year, and the average cost per ration.

On motion of Mr. Ross, of Ohio, it was resolved, that the committee on public lands be instructed to inquire into the expediency of providing by law for the future sale of public lands in half-quarter sections, and the propriety of reducing the price. On motion of Mr. Robertson, of Kentucky, it was resolved, that the same committee be instructed to inquire into the expediency of abolishing credits in the sale of public lands, and that a less quantity may be purchased and at a less price than under the existing law.

Dec. 20.—Petitions were received for the encouragement of manufactures, and for a general system of bankruptcy.

A resolution was submitted to inquire into the expediency of making all duties payable in cash.

Another to inquire into the propriety of repealing all laws allowing drawback.

Pennsylvania Legislature

SENATE.

Dec. 13.—Several petitions were received, but none of general interest. The standing committees were appointed.

Dec. 14.—Nothing of general interest.

Dec. 15.—The governor's message was referred to several committees.

Dec. 16.—The bill incorporating the Kensington district of the Northern Liberties, was passed.

Dec. 17.—A bill directing the clerk to pay postage on letters to members, was rejected.

HOUSE OF REPRESENTATIVES.

Dec. 13.—Petitions were received for assistance to the Perkiomen and Reading turnpike company, to the Pittsburgh turnpike, to the Chambersburgh and Bedford turnpikes, and for aid to the Washington college.

A letter was received from the building commissioners, stating the progress, &c. of the state capitol. The governor's message was referred to various committees.

Mr. W. J. Duane introduced a bill to extend to German redemptioners arriving in the city of Philadelphia, the benefit of the laws relating to apprentices and servants, in order to coerce from those who take them, a compliance with the conditions on which they are bound.

Six copies of Walsh's Appeal were ordered to be purchased.

The judiciary committee were instructed to inquire into the expediency of so amending the laws relating to mortgages, as to make priority of record constitute a preference to priority of lien.

Dec. 14.—Many petitions were received. Mr. Randall reported a bill to abolish imprisonment for debt. A resolution was passed to wear crape on the arm for thirty days, as a token of respect to the late Simon Snyder.

INTERNAL IMPROVEMENTS.

Mr. Jenks laid on the table the following preamble and resolution:

'Whereas the interest and prosperity of the people are intimately connected with the judicious appropriation of the public monies; and whereas a free intercourse at all seasons of the year between the metropolis and the northern and western portions of the state, by means of roads and canals, would be highly beneficial to every class of the community, and, when once accomplished, could not fail to produce revenue that would be amply sufficient for the accomplishment of all local and minor objects of internal improvement; and whereas local interest ought to give way to general good: Therefore,

Resolved, That the committee on roads and inland navigation be instructed to report to this House, as soon as practicable, the objects of general improvement, which in their opinion ought to be selected for the appropriation of the public monies.'

Dec. 15.—A petition was received for assistance to Jefferson college; and five from the city and county of Philadelphia, for equalizing taxation on real and personal estate.

Mr. Thackara reported a bill to prevent vexatious suits at law.

Mr. Randall laid on the table a bill to provide by law for the payment of the salary of the recorder of Philadelphia. It has been heretofore paid by the city.

Some debate took place on the subject of

appointing a committee to inquire into the expediency of reducing the salaries of public officers.

Dec. 16.—A petition was received from Northumberland county, praying for a law to stay executions, and compel creditors to take property in payment of debts.

A petition was received from Chester, praying that the right of granting tavern licenses may be given to grand juries instead of judges.

A resolution was passed, directing the clerk to pay the postage on all letters to the members.

Mr. Duane's resolutions '*requesting* our senators and representatives to vote against the admission of any territory as a state into the union without prohibiting the further introduction of slavery into such territory,' were unanimously passed. Some discussion took place on the right of *instructing* the senators, but it was determined to *request* them.

A resolution was laid on the table, to direct the committee on the judiciary to inquire into the expediency of adding two judges to the supreme court.

The following resolution was laid on the table:

'Resolved, That the committee on roads and inland navigation be instructed to inquire into the expediency of laying an additional duty on sales at auction, and of appropriating the proceeds for the completion of the Union Canal.'

Dec. 17.—Mr. Jenks' resolution was passed.

Mr. Bailey laid on the table the following preamble and resolution:

'Whereas the permanent prosperity of the commonwealth depends in a great measure upon the accomplishment of a liberal system of internal improvement; and whereas it is of the first importance, that a safe and easy way to market should be opened to the citizens inhabiting the country adjacent to the Susquehanna and its branches, by which the risks and difficulties of descending through the falls to the mouth of the river may be avoided; and whereas the governor, in his message to the legislature, at the commencement of the last session, expressed the opinion, founded upon information from scientific men, that a canal might be made from the Susquehanna to Lancaster city; and it is the opinion of many persons acquainted with the ground, that a canal may be made with advantage through the Great Valley of Chester county, connecting the waters of the Schuylkill and Susquehanna, and of opening a way for the produce descending that river to the market at Philadelphia: Therefore,

Resolved, That the committee on roads and inland navigation, be instructed to inquire into the expediency of appointing commissioners to explore the route between the Schuylkill and Susquehanna through the Great Valley of Chester county, and to report the practicability of forming a canal thereon: the possibility of making the city of Lancaster a point in the route, and such other

information relating to the subject as they shall deem useful.'

A motion to adjourn during the Christmas holidays was rejected.

Judge Cooper has been elected Professor of Chemistry in the South Carolina College, vice Dr. Edward Smith, deceased.

Sailors wages are said to have increased from 8 to 12 dollars per month in New York.

It is said that there are no sailors to be had in Baltimore; but this is attributed to their having all shipped with pirates.

Deaths in this city for the week ending on the 18th, 50.

Deaths in Baltimore for the week ending on the 13th, 20.

Miscellany.

Adam Poe's Contest with two Indians.

About the year 1782, six or seven Wyandot Indians crossed over to the south side of the Ohio river, fifty miles below Pittsburgh, and in their hostile excursions among our early settlers killed an old man, whom they found alone in one of the houses which they plundered. The news soon spread among the white people, seven or eight of whom seized their rifles and pursued the marauders. In this party were two brothers, named Adam and Andrew Poe, strong and active men, and much respected in the settlement. The Indians had frequently been over before, had sometimes penetrated twenty miles into the country, and had always succeeded in recrossing the river without being overtaken by our people. The Poes and their companions were therefore particularly anxious not to let them escape on this occasion. They pursued them all night, and in the morning found themselves, as they expected, upon the right track. The Indians could now be easily followed by the traces left upon the dew. The print of one very large foot was seen, and it was thus known that a famous Indian, of uncommon size and strength, must be of the party. The track led to the river. Our people followed it directly, Adam Poe excepted, who feared that they might be taken by surprise, and broke off from the rest, to go along on the edge of the bank, under the cover of trees and bushes, and to fall upon the savages suddenly, that he might get them between his own fire and that of his companions. At the point where he suspected they were, he saw the rafts, which they were accustomed to push before them when they swam the river, and on which they placed their blankets, tomahawks, and guns. The Indians themselves he could not see, and was obliged to go partly down the bank to get a shot at them. As he descended with his rifle cocked, he discovered two, the celebrated large Indian and a smaller one, se-

parated from the others, holding their rifles also cocked in their hands. He took aim at the large one, but his rifle snapped without giving the intended fire. The Indians turned instantly at the sound. Poe was too near them to retreat, and had not time to cock and take aim again. Suddenly he leaped down upon them, and caught the large Indian by the breast, and the small one by throwing an arm round his neck. They all fell together, but Poe was uppermost. While he was struggling to keep down the large Indian, the small one, at a word spoken by his fellow savage, slipped his neck out of Poe's embrace, and ran to the raft for a tomahawk. The large Indian at this moment threw his arms about Poe's body and held him fast, that the other might come up and kill him. Poe watched the approach and the descending arm of the small Indian so well, that at the instant of the intended stroke he raised his foot, and by a vigorous and skilful blow knocked the tomahawk from the assailant's hand. At this the large Indian cried out with an exclamation of contempt for the small one. The latter however caught his tomahawk again and approached more cautiously, waving his arm up and down with mock blows to deceive Poe as to the stroke intended to be real and fatal. Poe however was so vigilant and active that he averted the tomahawk from his head, and received it upon his wrist, with a considerable wound, deep enough to cripple, but not entirely to destroy the use of his hand. In this crisis of peril, he made a violent effort, and broke loose from the large Indian. He snatched a rifle, and shot the small one through the breast, as he ran up a third time with his lifted tomahawk. The large Indian was now on his feet, and grasping Poe by the shoulder and the leg, hurled him in the air heels over head upon the shore. Poe instantly rose, and a new and more desperate struggle ensued. The bank was slippery, and they fell into the water, where each strove to drown the other. Their efforts were long and doubtful, each alternately under and half strangled, till Poe fortunately grasped, with his unwounded hand, the tuft of hair upon the scalp of the Indian, and forced his head into the water. This appeared to be decisive of his fate, for soon he manifested all the symptoms of a drowning man bewildered in the moment of death. Poe relaxed his hold, and discovered too late the stratagem. The Indian was instantly upon his feet again, and engaged anew in the fierce contest for life and victory.

They were naturally carried further into the stream, and the current becoming strong, bore them beyond their depth. They were now compelled to loosen their hold upon each other, and to swim for mutual safety. Both sought the shore to seize a gun, but the Indian was the best swimmer and gained it first. Poe then immediately turned back into the water to avoid a greater danger, meaning to dive if possible to escape the fire. Fortunately for him the Indian caught up the rifle

which had been discharged into the breast of his smaller companion. At this critical juncture, Andrew the brother returned in haste, having left the party who had been in pursuit of the other Indians, and who had killed all but one of them, at the expense of three of their own lives. He had heard that Adam was in great peril, and alone in the fight, with two against him. One of our people, following not far in the rear of Andrew, mistook Adam in the water with his bloody hand for a wounded Indian, and fired a bullet into his shoulder. Adam cried out to his brother to kill the big Indian on the shore, but Andrew's gun had been discharged and was not again loaded. The contest was now between the savage and Andrew. Each laboured to load his rifle first. The Indian, after putting in his powder, and hurrying his motions to force down the ball, drew out his ramrod with such violence, as to throw it some yards into the water. While he ran to pick it up, Andrew gained an advantage, and shot the Indian just as he was raising his gun to his eye for a deadly aim. Andrew then jumped into the river to assist his wounded brother to the shore; but Adam thinking more of carrying the big Indian home as a trophy, than of his own wounds, urged Andrew to go back and prevent the struggling savage from rolling himself into the current and escaping. Andrew, however, was too solicitous for the fate of Adam to allow him to obey, and the Indian, jealous of his honour as a warrior even in death, and knowing well the intentions of his white conquerors, succeeded in retaining life and action long enough to reach the current, by which his dead body was carried down beyond the chance of pursuit.

This native was the most distinguished among five celebrated brothers belonging to the royal family of the tribe of Wyandots. Notwithstanding he was engaged in this predatory expedition, he was acknowledged by all to be peculiarly magnanimous for an Indian, and had contributed, more than any other individual, to preserve and extend the practice, which was known to prevail in his tribe, that of not taking the lives of prisoners, and of not suffering them to be treated ill. This practice was an honourable distinction for the Wyandots, as was well understood by the white people who were traders with the Indians, and by those of our early settlers, and brethren who had been made prisoners in war. It was a common remark among them, 'if we become the prisoners of the Wyandots we shall be fortunate.' The death of this large Indian and of his four brothers, who were all in the party, was more deeply lamented by the tribe, as was afterwards learned, than all the other losses sustained during the hostilities carried on between them and us. There was a universal, solemn, and distressing mourning.

Adam Poe recovered from his wounds, and gave this account in person to James Morrison, esq., from whom we have received it,

and by whom we are assured that it is correct. The courage and enterprise, the suffering and fortitude, the decision and perseverance, of the early settlers of this western country, by whose labours we are now so peaceful and happy, ought not to be forgotten, but may well be related from time to time to excite in us the spirit of similar virtues, and to teach us how to consider the slight privations which we are, or may be, called to meet. Gratitude is more appropriate to our condition than discontent. U. *Western Rev.*]

BANK OF RUSSIA.

On the 29th of December, 1768, the empress Catherine, at the commencement of the war against the Turks, established the Bank of Assignats, designed to issue notes or bills payable to bearer. In the manifesto, these notes were declared, in general terms, and very indistinctly, "to be payable in current money." This doubt, however, was soon dispelled. In the first months of their issue, it was ascertained that they would be discharged in copper only, in imitation of the Bank of Stockholm. But this was as impossible as it was improper. The value of copper was too small and too variable, and the difficulty of its transportation rendered it impracticable for this purpose. Only gold or silver could be the standard. The notes, therefore, soon *ceased to be notes of credit*, and became merely a state paper money. This paper money, however, by its convenience, the moderation of the government in its issue, and the regulation, that it should be received instead of specie in all the government treasuries, *bore a value above its nominal par with silver*. In the first eighteen years, only 40,000,000 (equivalent then to nearly 5,000,000*l.* sterling) were in circulation, and no note for less than twenty-five roubles, or about 5*l.*, at the exchange of that time. This limitation of quantity, with the real advantages of paper currency, made the assignats so agreeable to the public, that until 1788, they preserved an *agio*, or premium, of 5 per cent. above copper money, and silver had not more than *three per cent. premium in its favour*. In 1774, at the peace of that date, paper was on a par with silver.

In 1786, the empress created a Loan Bank, and increased the mass of assignats to 100,000,000, engaging to carry it no farther; but the wars with Turkey, Sweden, Poland, and Persia, occasioned the failure of this engagement in the year 1790. At her decease, in 1796, the assignats in circulation amounted to about 160,000,000 of roubles.

This increase was too great and too sudden, and necessarily led to depreciation. In 1788, paper was at discount; in 1795, it had sunk nearly one-third, and metallic currency had disappeared so much the more, because paper notes of ten and of five roubles were

issued, and all payments made in paper or copper.

The progress of the depreciation will be rendered more evident by the following statement, which we extract from another part of M. Storch's work.

Account of the number of Paper Assignats in circulation in Russia, from 1786 to 1814 inclusive, and of the variations in their value as compared with silver.

Years	Annual emissions of paper roubles or assignats.	Total paper roubles in circulation.	Mean value of the silver rouble in assignats.	Mean value of the assignat in silver.
	Roubles.	Roubles.	Copecks.	Copecks.
1786	40,000,000	40,000,000	102	98
1787	60,000,000	100,000,000	103	97
1788	—	100,000,000	108	92 3-5
1789	—	100,000,000	109	91 1-4
1790	11,000,000	111,000,000	115	87
1791	6,000,000	117,000,000	123	81 1-3
1792	3,000,000	120,000,000	126	79 1-3
1793	4,000,000	124,000,000	135	74
1794	21,550,000	145,550,000	141	71
1795	4,450,000	150,000,000	146	68 1-2
1796	7,703,640	157,703,640	142	79 1-2
1797	5,871,200	163,574,840	126	79 1-3
1798	31,356,765	194,931,605	137	73
1799	15,068,395	210,000,000	148	67 1-2
1800	2,689,335	212,689,335	153	65 1-2
1801	8,799,000	221,488,335	151	66 1-2
1802	8,976,090	230,464,425	140	71 2-5
1803	17,160,240	247,624,665	125	80
1804	13,033,885	260,658,550	126	79 1-3
1805	31,540,560	292,199,110	130	77
1806	27,040,850	319,239,960	137	73
1807	63,089,545	382,329,505	148	67 1-2
1808	95,039,075	477,368,580	186	53 1-2
1809	55,832,720	533,201,300	224	44 2-3
1810	43,798,700	577,000,000	300	33 1-3
1811	—	577,000,000	394	25 2-5
1812	—	577,000,000	379	26 2-5
1813	—	577,000,000	397	25 1-5
1814	—	577,000,000	397	25 1-3

Since the peace, the Russian government has made every possible exertion to lessen the quantity of paper money. From a report of the finance minister, M. Gourieff, dated 9th April last, it appears that about 118 millions of assignats have already been withdrawn from circulation, and it is estimated that in the next two years an additional 100 millions will be cancelled. This has been partly effected by funding the assignats, and partly by exchanging them at certain rates for gold and silver roubles, of which there has been of late a very extensive coinage. In consequence of a diminution of their number, the relative value of the assignats has advanced considerably; and the paper prices of all commodities have proportionably declined.

[*Liverp. Kaleid.*]

BANK OF ENGLAND.

The lending of large sums to government is a transaction altogether incompatible with the real nature of banking, and which could not fail to prove fatal to any company who

were obliged to pay their notes on demand. If previously to a loan being made to government, the currency was sufficiently abundant, and paper on a par with gold, it is obvious that the additional supply of paper thus thrown into the market would sink its value, and there would be a run on the bank for gold for exportation: Thus circumstanced, unless the bank had immense surplus funds, which it could easily convert into cash, or bullion, it would stand an extreme risk of being obliged to stop payment, and would, at all events, suffer considerable embarrassment and difficulty.

If a considerable amount of paper had been borrowed by government from a bank on long credit, without supposing its issue to have been in excess, it might nevertheless expose the establishment to great hazard. In the case of either real or imaginary dangers, arising from political or other causes, a run is always made on the banks; and if their funds are locked up, or not available, the consequences must inevitably prove fatal.

Circumstances of this nature caused the crisis of 1797, and of the Restriction Act. The issues of the Bank of England were not at that time superabundant, for there was no excess of the market above the mint price of gold. The run was entirely owing to political causes, and would soon have subsided had the directors been able sufficiently to control their issues, or had their paper been only issued to private individuals, from whom, in the course of 60 days at farthest, they would have received payment. Their capital, however, and several millions of their notes having been lent to government, they could not recover payment of either the one or the other. The beggarly importunity of the ministry had emptied their coffers, and multiplied their notes—increased their debts, and lessened their means of payment. "It was then owing," says Mr. Ricardo, "to the too intimate connexion between the bank and government, that the restriction became necessary; it is to that cause too that we have owed its continuance."

The late reports of the bank committees afford the most convincing proof of the accuracy of this statement. From 1790 to 1797, when the Restriction Act passed, the amount of the advances made by the bank to government, and of the notes outstanding on the 25th of each year, was:—

	BANK NOTES.	ADVANCES.
1790	10,217,360	7,908,968
1791	11,699,140	9,603,978
1792	11,349,810	9,839,338
1793	11,431,180	9,066,698
1794	10,963,380	8,786,514
1795	13,539,160	11,114,230
1796	11,030,110	11,718,730

The amount of the advances of the bank to government on the 20th of February and 2d of August each year since 1814, and of the bank notes issued during the corresponding half years, is reported by the commons committee as follows:—

BANK NOTES.

1814. January to June	25,511,012
July to Dec.	23,291,132
1815. January to June	27,155,824
July to Dec.	26,618,210
1816. January to June	26,468,280
July to Dec.	26,681,398
1817. January to June	27,339,768
July to Dec.	29,210,035
1818. January to June	27,954,558
July to Dec.	26,487,859

ADVANCES.

February 26, 1814,	23,607,300
August 2, —	34,937,800
February 26, 1815,	27,156,000
August 2, —	24,079,100
February 26, 1816,	18,988,300
August 2, —	36,042,600
February 26, 1817,	23,399,500
August 2, —	27,330,718
February 26, 1818,	27,002,000
August 2, —	27,060,900
February 11, 1819,	21,930,000

The circumstance of the public creditors being obliged to receive payment of their dividends in Bank of England paper, has, since the epoch of the restriction, rendered it nearly as *compulsory* as that of any of the continental states. That it has not been equally depreciated is to be ascribed entirely to its being liable to have its concerns inquired into by parliament, and canvassed by the public. We trust, however, that this ruinous connexion between the bank and government is now about to be dissolved; that in future the directors will be compelled to regulate their issues by reference to a fixed standard, and not according to their varying whims and caprices; and that they will no longer have it in their power to play at fast and loose with all the property in the kingdom.

Like the Bank of Venice, the Bank of England owed its origin and its privileges to the distresses of government. It was founded in 1694. The original capital was only £1,200,000, mortgaged to government for an annual interest of £100,000. In a year or two afterwards its capital was increased to £1,400,000. In 1700 the bank obtained from parliament an assurance, that during the continuance of its charter, no similar charter should be granted to any banking company established in England; and in 1708 it was enacted, that no more than *six persons should be capable of entering into any association or copartnership for the purpose of carrying on the trade of bankers*. This most impolitic regulation has not hitherto been repealed. The capital of the Bank of England now amounts to £11,686,800*l.*, lent to government at an interest of three per cent. and payable at the expiration of the charter. The bank notes in circulation on 26th August, 1818, amounted to £28,087,865*l.*, and on February 11, 1819, to £23,028,820*l.* In 1790, the bank had gold coin and bullion in its coffers of the value of £5,619,000*l.*; but on 26th February, 1797, the epoch of the restriction, this supply was reduced so low as £1,272,000*l.* We do not know

that an account has been published of the amount of cash and bullion in the bank at any subsequent period.

The following is a brief view of a few leading points of difference between our present situation and that in which we were when the restriction took place.

	Jan. 1797.	Jan. 1819.
Annual Net Revenue,	£18,737,760	49,549,899
Interest of Public Debt,	11,844,407	29,068,187
Sinking Fund,	2,338,984	14,726,039
Outstanding Exchequer Bills,	13,218,600	43,655,600
Unfunded Debt,	5,248,932	1,677,125
Outstanding Credits due to the Bank of England,	17,597,280	39,096,900
Exports	30,518,000	53,559,711
Imports	23,186,000	36,900,681
Circulating Gold Coin,	30,000,000	—
Bank of England Notes,	8,640,250	25,956,840
Country Banks,	230	750

To which may be added an increase of population exceeding one million and a half.

Ibid.]

[FROM BLACKWOOD'S EDINBURGH MAGAZINE.]

On a New and Improved Method of teaching Latin.

What shall be taught; is a question interesting to every one; but to inquire into the management of the business of teaching, with a view to improvement, seems, in this country at least, never to have been considered as worthy of much attention. Yet surely the successful issue of the labours of pupils and preceptors must depend in a great measure on the mode of conducting the business of instruction. The system of Joseph Lancaster, as far as it was practicable, has been long introduced more or less into many of our numerous schools, but it can never be generally adopted except in charity schools. Those who are able to pay their children's education will be disposed to think, and justly, that if they are sufficiently acquainted with what they have been studying to act as monitors in teaching it to others, they ought to be employed in learning something themselves. Some alteration in the mode of teaching Latin seems essentially necessary. It is a circumstance familiar to the observation of every scholar, that however well acquainted with the reading of Latin our countrymen may be, they generally seem to feel nearly as much confusion in hearing a quotation of any length from that dead language, as they should at the appearance of one of those gentlemen who spoke it when it was living; on the continent, where many of the professors deliver their lectures in Latin, this auricular imperfection is removed by listening to discussions on subjects with which students must previously be in some degree acquainted; while it is extremely improbable that the professors can deliver themselves so rapidly, as not to afford their auditors an opportunity to be-

come familiarized in a short time to the language employed. The discontinuance of lecturing in Latin in our universities may have been favourable to the diffusion of knowledge, but it must be quite evident to every careful observer, that it has been very injurious to the cultivation of Latin. To remedy this, and at the same time improve the management of teaching languages in general, I submit the following plan for the consideration of all those interested in the business of education. According to the present mode of teaching languages in schools and universities, the accession of every new pupil is an advantage to the teacher, but a loss to the other pupils, at least if actual examinations are useful. By the plan which I am about to propose, each individual will have all the advantage of going over the business of the class, nearly as if alone, together with the stimulating influence of the emulation excited by public teaching. It will be obvious to those acquainted with the subject, that a good deal of what I suggest is only a modification of Dufief's plan of teaching French, as laid down in his "Nature displayed." This plan, in opposition to a most disingenuous *cross* critic, I hold to be very ingenious, and to grown pupils, at least, it must be extremely useful. But it does not appear to me at all necessary to have recourse to so violent a change of books and of system as Dufief recommended. All the advantages he can promise, and some more, together with all the benefits of the present mode of tuition, may, I think, be obtained by the adoption of the following method: The business of a Latin class is comprised in three great divisions, 1st Lessons got by memory; 2nd, Versions; 3d, Lessons to be translated into English.

1st, Lessons to be said from Memory

In declining nouns, adjectives, &c. the whole class say at once. The master, to preserve regularity and uniformity, names each case, the pupils immediately adding the Latin and the English. In this manner all the declension is gone over. When verbs are said, the master names the word, tense, person, and number; after the first person singular it is only necessary to utter the words second, third, first plural, second, third, for the rest of each tense. In all large classes a great deal of time is lost by going over the lesson several times, so as to let every one say something; by saying at once much time will be gained though each lesson be repeated two or three times. To this part of the plan there can be only two objections. That some of the class may go wrong unobserved, or that they may not say at all. To the first objection I answer, that if a person possessed of a good ear can at once discover a false note struck by any individual of a large band of musicians, though playing a piece harmonised in many parts, much more will an attentive master be able to discover what may be called a false note, when his pupils are all going over the same part, rendered more distinct by articulation. I do not speak

hypothetically when I affirm this will be found to be the fact. With respect to the second objection, it is easily answered. Supposing some, from ignorance or perverseness, not to say, still they will hear what is said; for it is one great advantage of this plan, that it breaks all combinations in idleness; as the master, though he may not always discover any one who does not say, can at once observe any one who addresses his neighbour, and check his inattention. Besides, it is supposing too much to imagine, that many should remain silent from perverseness, and none need do so from ignorance, as they may still say with the help of their class-fellows as at present; and surely that plan is to be preferred, where all may say at a time, and where many must do so, to that where only one can. To keep alive the industry of any disposed to be lazy, the lessons might be heard occasionally in the present manner; in which way also it will be necessary to hear the grammatical rules, and whatever cannot be conveniently divided into small portions. When the lessons are given out for next day, they are to be read as the others were said, the master taking particular care to articulate distinctly any word that may appear difficult to pronounce.

If dialogues are said from memory in the class, they are heard in this manner. The master gives a sentence of the English, desiring one of the class to give the Latin, and so on till he has ascertained that it has been all properly prepared. When this is done, let him give the first Latin sentence, calling on the class at once to give the English, and to add to it the Latin sentence just pronounced. In this manner, all the dialogue is to be heard, by which means each individual in the class will say the whole.

2d, Versions.

The correcting of versions is generally the most laborious part of a teacher's duty, and the most useless to the scholar. I propose to render this much more interesting and advantageous to the pupils, by employing themselves as the correctors of each other. Let the dux exchange themes with the boy at the bottom of the class, the second from the top with the second from the bottom, and so on through the whole, in this manner the labour will be probably in proportion to the ability for it. When the exchanges are completed, the master reads from the English a small portion, calling on the class, in order, to read the Latin; he then points out what is wrong, and how it is to be altered; each individual corrects the version before him, and when he has finished, marks the number of errors at the bottom. By making the number of errors decide the place each holds in the class, he will be induced to examine the corrections, in order to see whether they be fairly stated; and in a few minutes an affair will thus be profitably gone through, which by the present plan, often occasions the teacher much labour, accompanied with the melancholy reflection, that what he pain-

fully corrects is, without ever being looked at, carelessly thrown aside. To this part of the plan I do not anticipate any objections, the most ignorant will be able to perform, under the direction of the master, the task imposed on him, while the supervision of his class-fellows, will have considerable influence in exciting the attention of the student while writing his version. What may be the practice at present with respect to Latin themes in our universities I do not know; but twenty or thirty years ago, in one of them, at least, it was quite a solemn farce. The versions were regularly bundled up and carried home by the janitor to the house of the professor, and as regularly brought back, nine out of ten of them unexamined, or at least without the slightest mark of praise or reprobation. *Mutatis mutandis*, the plan which I have chalked out, would certainly be preferable. Should it be alleged that this would tend to spread the critical *Cacoethes*, already so prevalent among our countrymen, it may be answered, that perhaps it would improve the talent as well as the taste for criticism.

Translation Lessons.

These lessons are first gone over in the usual way, each pupil individually translating a portion, and undergoing the customary grammatical examination. After this is finished, the master orders all the books to be shut. He then begins the lesson, giving out a short sentence or member of a sentence, in the arrangement in which it is printed, calling on the class simultaneously to give the English, and to add the Latin sentence they have just heard; and in this manner he will go over the whole translation lessons. The importance of this part of the plan must be quite evident. Every pupil will translate the whole lesson; he will pronounce all the Latin correctly, if his master do so; and he will have the advantage of saying dialogues, according to the genuine structure and arrangement of the language, without the labour of previously learning them. After a few months, the master should give the class the English, desiring them to give the Latin, or this might be done in addition to the other mode of hearing the lesson. And I am satisfied he will be surprised at the facility with which they will give their Latin, should this plan be rigidly and regularly followed. Perhaps it may be here objected, that from the artificial structure of the Latin language, when the sentences are broken into small portions, the sense will come out awkwardly and in grotesque English. To this I reply, that the sense will meet the ear of the pupil, exactly as it did the Romans themselves; and the corrupting effect of the odd translation, will be counteracted by the previous translation in the ordinary way.

The method of conducting a public Latin class, which I have now gone over, will be attended with the following signal advantages: Every individual of the class will be almost constantly employed; he will say nearly all that should be got by memory; he will trans-

late the entire lesson of each day; he will acquire an accurate pronunciation; he will understand the language as well when he hears it as when he reads it; certainly a great desideratum. His ear and his organs of speech will get completely attuned to its structure and melody, and by the time he has finished his course, he will be able not only to quote readily the authors he has studied, but even to speak and write in their language, with a facility and correctness totally unattainable by the present mode of tuition. Perhaps, before concluding, it may be as well to advert to the difficulties attending the adoption of this plan, even where its advantages are acknowledged. External opposition no teacher has reason to fear; if his employers take the trouble to inform themselves, whether he be a successful teacher, they will hardly inquire what plan he follows, particularly if his castigations are moderate; and, fortunately for this plan, in that respect it will materially diminish the necessity of punishments, as the pupils, being much more employed, will have less time for idleness and mischief. Within the walls of his class room, what opposition has he to dread? Men, it is said, are but children of a larger growth, yet somehow they have all got of late rather impatient of arbitrary power, and even in many cases of legitimate sway; but where the teacher sits, he reigns uncontrolled and uncontrollable. Some little difficulty may be experienced, perhaps, on introducing the plan, in classes already advanced in the study of the language, but by a few days perseverance it will vanish; with a class beginning the study, one mode of teaching must be as easily adopted as another. But indeed the greatest opposition I anticipate, is not from pupils, nor from parents, but from teachers themselves, that genus irritable which is in many instances more apt to teach than to learn. However, as I would fain obtain, for this my lucubration, candid consideration, and intelligent patronage, I hereby dedicate it, with every feeling of respect and esteem, to the Rector and other masters of the High School of Edinburgh. W.

MARRIED.

On the 10th ultimo, by the Rev. David Parker, Robert Barns, of Rochdale, England, to Miss Mary C. Wurts, daughter of the late Maurice Wurts.

On the 16th instant, by the Rev. Jacob Brodhead, Mr. Thomas M. Rush, to Miss Ann, daughter of Abraham Sink, all of this city.

On the 16th instant, by the Rev. Philip F. Mayer, Ambrose Laussat, merchant, to Miss Christiana Sophia, daughter of Jacob Chrystler, of this city.

On the 16th inst. by the Rev. Dr. E. S. Ely, Mr. Nathaniel Holland, of this city, to Mrs. Martha H. Hastings, of Boston, (Mass.) daughter of David Grive, of Providence, (R. I.)

DIED.

On the 6th inst. in the 78th year of his age, the Rev. Dr. Annan, a native of Scotland, but long a respectable inhabitant of this country.

On the 17th inst. in her 28th year, Mrs. Hannah Samson, consort of Hasadiah P. Samson.

On the 23d ult. in Michigan territory, James H. Hamm, M. D. aged 27 years, formerly of this city.

Clark & Raser, Printers.

